

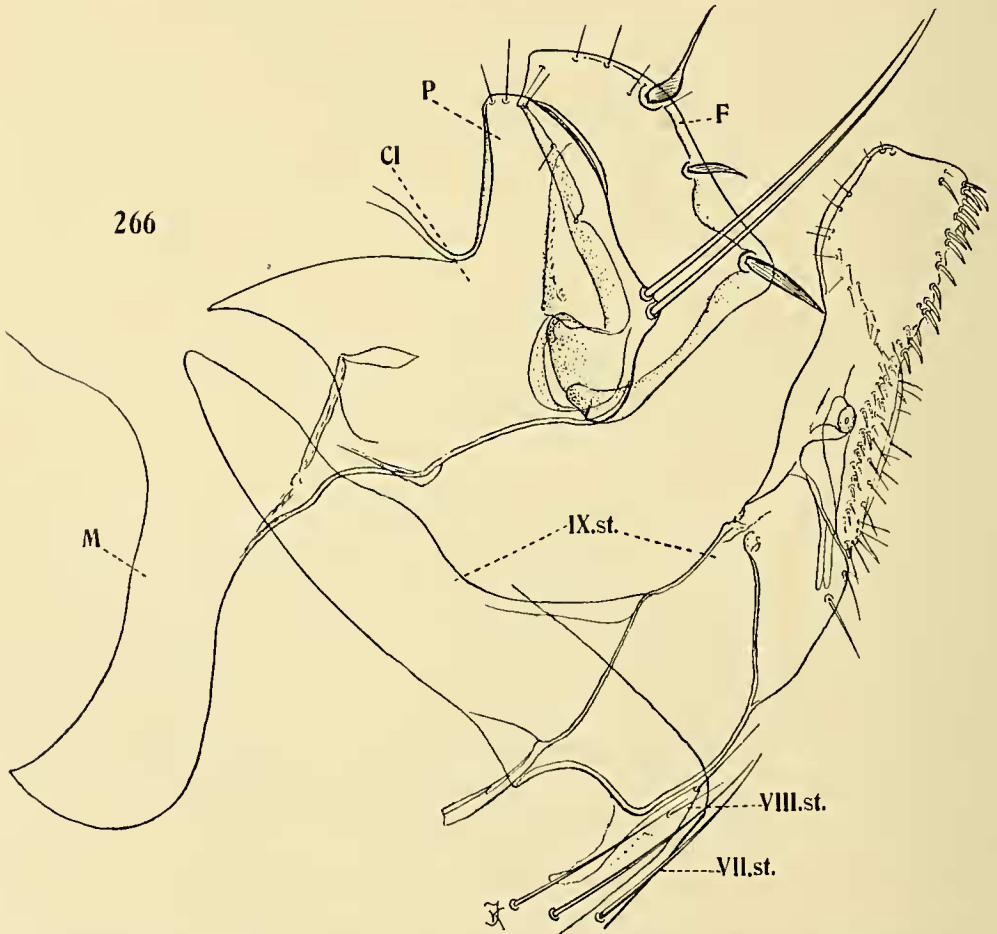
ON SOME NEARCTIC FLEAS.

By KARL JORDAN.

(With 6 text-figures.)

1. *Opisodasys robustus* Jordan 1925 (text-fig. 266).

THE species was originally described from ♀♀ only. In a small series of the species lately received there is a male, of which we here figure the genitalia. The tergite VIII is large as in the allied species and bears at the upper portion of the posterior margin a row of 9 long bristles and at the ventral margin 10 or 11,



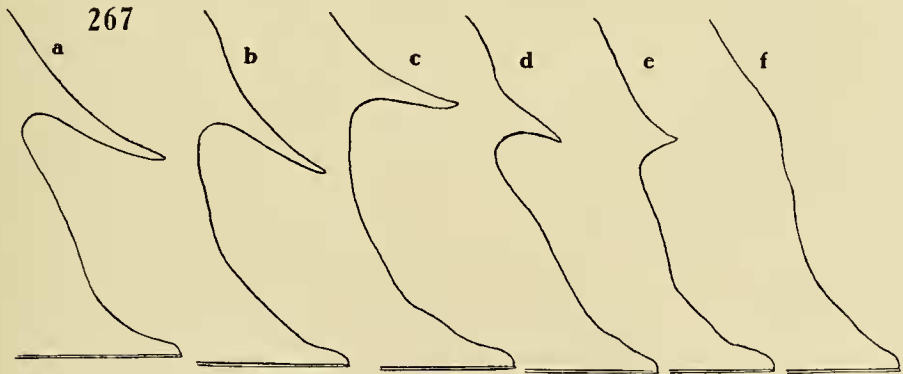
of which several are exceptionally long; behind the stigma the segment forms a sharp angle directed upwards; the posterior marginal area of this projection is densely studded with teeth on the inner side. Sternum VIII (text-fig. 266) quite small, its apical half lanceolate, with a shortish bristle at the top and a smaller one on the side. Process P of the clasper nearly straight on the frontal side and gently rounded on the posterior one, not quite attaining the tip of the digitoid F.

This sclerite F apically obliquely truncate, the anterior angle being lower than the posterior one; apart from its pedicel the sclerite is broad, its anterior margin being straight and the posterior margin slightly incurved and then farther upwards somewhat rounded, the sclerite becoming gradually narrower at apex; oblique apical margin about one-fourth as long as the ventral margin; posterior ventral angle rounded, prominent; near this angle a large spiniform, below middle of posterior margin a smaller spiniform, both of these bristles sharply pointed, at about two-thirds a third spiniform of a very different shape, its basal third being broad and the rest obliquely curved upwards and gradually narrowed to a sharp point. Ventral arm of sternite IX characteristic: its proximal half with hardly any bristles, whereas the distal half bears numerous short pale spiniform ones along the ventral margin (the proximal half of the series are on the inner side of the long lobe which projects forward and are indicated in the figure by dotted lines).

We are much indebted for this series to Professor R. A. Flock, who obtained the specimens in the Catalina Mts., Arizona, on *Sciurus arizonensis catalina*.

2. *Orchopeas sexdentatus cascadenis* subsp. nov. (text-fig. 267).

Based on the ♀. The range of variability in the females from the western districts of Oregon is most instructive. Whereas in *O. sexdentatus agilis* Roths. 1905, from Alberta and British Columbia, sternum VII of the abdomen varies from being strongly rounded, with a more or less distinct indication of a sinus, to being deeply sinuate, with a long obtuse process above the sinus, in *O. s. cascadenis*



the process is always sharply pointed and varies from being long to being absent; text-fig. 267 illustrates this variability, the six figures representing selected specimens obtained at the same locality on the same host. If sufficient specimens are examined the disappearance of the process is found to be gradual. In *O. s. agilis* the rounded segment is ancestral; in *O. s. cascadenis*, on the contrary, the segment without process is the most advanced modification.

Oregon: Odell Lake, on *Neotoma fuscipes fuscipes*, 31. vii. 36, a series (type); from other western places also on *Neotoma cinerea occidentalis*. Collected by Professor C. A. Hubbard.

Phaneris gen. nov.

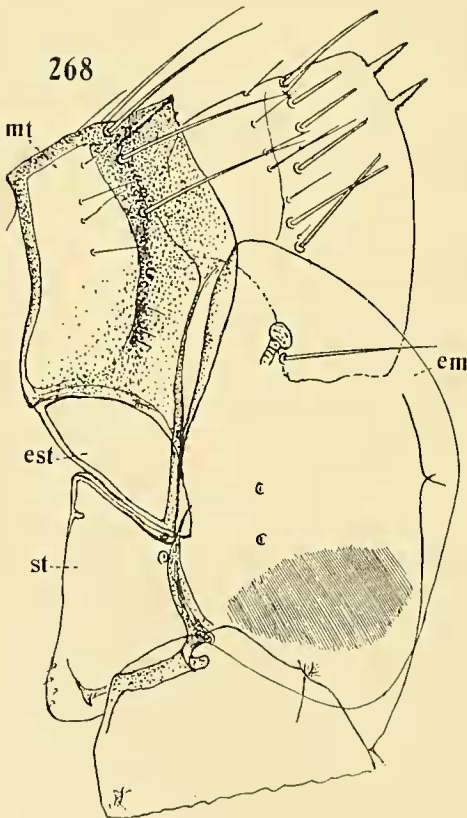
♀. Near *Rectofrontia* Wagner 1930, of which it is a very interesting and, for the understanding of relationship, important modification. The genal spines of

Rectofrontia and short spiniforms on the inner surface of the hindcoxa are lost. The bristles of the abdomen are very numerous and long.

Frontal tubercle below middle as in *R. fraternus* Baker 1895; genal margin expanded ventrad, incurved between maxilla and forecoxa, a rounded lobe being formed, which is rather obscured by the maxilla lying under it; no vestige of eye. Bristles of thorax as compared with those of abdomen short and few; apical area of meso- and metanota short and strongly ehitinized, especially that of metanotum; episternum of metathorax longer than in *Rectofrontia*, very oblique (text-fig. 268, est); upper anterior angle of metasternum acute; metepimerum with patch of distinct striae (striarium) as in *Rectofrontia* and allied genera. Apical spines of abdomen longer than in *Rectofrontia*.—Genotype: *Ph. hubbardi* sp. nov.—Striarium diagrammatical in fig. 268.

3. *Phaneris hubbardi* sp. nov. (text-figs. 268, 269).

♀. On frons 2 long bristles, one of them on incassate margin of antennal groove, the other some distance from ventral margin, farther forward a row of 5 small ones, of which the one near antennal groove is the longest and strongest. On occiput three rows, containing each 5 bristles on both sides. Maxillary palpus reaching to end of forecoxa, a little longer than proboscis, the latter with curved bristle at apex. Bristles on thorax: on pronotum 15 in one row on the two sides together; on mesonotum 11 or 12 and in front of this row about 15 more or less irregularly scattered; on metanotum 8, 12. On mesopleura 5, on metepimerum 3; on mesonotum two subdorsal spines each side on under surface, these spines rather large, not like bristles in shape.



Many of the bristles of abdomen not gradually thinning to a long fine point, but remaining rather stout to near end, which is suddenly narrowed to a point as in a straight sword. Apical spines, the two sides together: on I 4; II 4; III 2; IV 2; V 1. Bristles more irregularly placed than is usual, the posterior row of the tergites very oblique, numbers in two specimens: I 9 or 18, 12 or 19; II 19 or 22, 19 or 20; III 30 or 24, 20; IV 25 or 26, 19 or 18; V 23 or 25, 17 or 18; VI 19, 18; VII 27 or 26, 19 or 20 (text-fig. 269, A). Some of the bristles in front of the posterior row as large as the posterior bristles, and those in between the long ones of the row longer than usual; on terga II to VI 3 or 4 (2 on one side of one segment) and on VII 4 or 5 below the stigma; lowest bristle of VI as long as hindtibia. Bristles

on sterna: II 7, 12; IV 7, 15; V 10, 15; VI 9, 14; VII 20, 17 in paratype, more in type figured (text-fig. 269, B).

Legs inclusive of coxae somewhat slenderer than in *R. fraternus*; chaetotaxy nearly the same, the longest bristles somewhat longer, the longest of hindtarsal segment I reaching well beyond II, and that of II much beyond IV; proportional length of tarsal segments as in *R. fraternus*.

Side of sternum VII (text-fig. 269, B) with rounded ventral sinus, the lobe above the sinus broad and round. Apical dorsal angle of widened portion of tergum VIII projecting as a lobe, which is different in size and shape in the two specimens. Hump of anal tergite indistinct; bristles in proximal area of anal sternum more numerous than in *R. fraternus*. Spermatheca (R.s.) smaller than in that species, almost gradually and but slightly narrowed from posterior end forward.

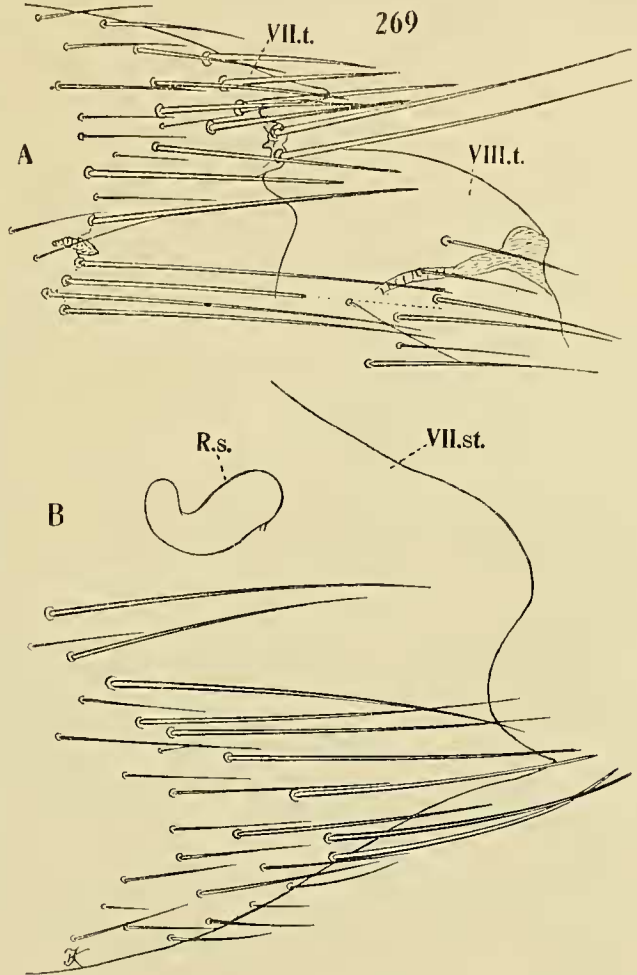
Length 3.1 mm., hind-femur 0.4 mm.

Oregon: Springwater, 20. vii. 31, on *Aplodontia rufa*, 1 ♀ type, returned to Professor Hubbard; 5. iv. 36, on the same host, 1 ♀ retained for the National collection.

One of the many discoveries of Professor C. A. Hubbard, from whom we may expect a publication on Oregon fleas in the near future. I have much pleasure in associating his name with this remarkable species.

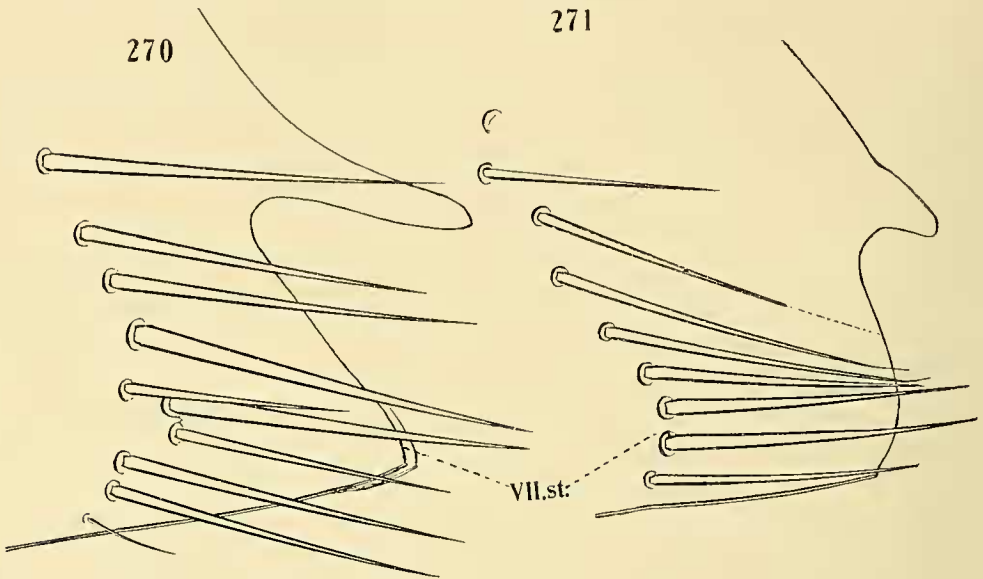
4. *Leptopsylla hamifer longiloba* subsp. nov. (text-fig. 270).

♀. Two ♀♀ from Alaska sent to me for description by Mr. Wm. L. Jellison, Assistant Parasitologist at the Rocky Mountain Laboratory, Hamilton, Montana, agree closely with *L. hamifer* Roths. 1906, as stated by Mr. Jellison *in litt.*, but differ considerably in sternum VII of the abdomen. As this segment is the same in *L. h. hamifer* from Alberta and *L. h. vigens* Jord. 1937 from Montana, whereas the ♂♂ of these two subspecies are distinguishable by the genitalia, we may expect that the ♂ of the new flea will, like the ♀, be more conspicuously different from



L. h. hamifer than is the ♂ of *L. h. vigenis*. I describe the new flea as a subspecies of *L. hamifer* in order to emphasize the relationship. The ♂ may prove this flea to represent a distinct species.

In *L. h. hamifer* and *L. h. vigenis* the sinus of VII. st. is not very deep and the lobe above it triangular, less than half as long as its distance from the ventral margin of the segment, sometimes more pointed than in text-fig. 271 (from an



Alberta specimen); in the new subspecies the sinus is much deeper, the margin below it more oblique and the lobe more than twice as long as in the other subspecies; the shape of the lobe varies a little in the two specimens as well as on the two sides of the body. Chaetotaxy as in the other subspecies, but in both specimens only one long bristle below the stigma of VIII. t. In type 7 antepygidial bristles on both sides, in the paratype 5. Some of the bristles of VII. st. very stout.

Alaska: 1 mile camp, Valdez Creek trail, 3,500 ft., 23 September 1937, 1 ♀ off *Microtus* sp., type, in collection of the Rocky Mountain Laboratory; Fairbanks, 11 September 1937, on "Rabbit," 1 ♀ paratype in the National collection at Tring.

EXPLANATION OF TEXT-FIGURES.

The lettering of the figures is explained in the text of the descriptions.

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| Fig. 266. | <i>Opisodasys robustus</i> , genitalia of ♂ | | p. 316 |
| 267. | <i>Orchopeas sexdentatus cascadensis</i> , sternum VII of ♀ | | p. 317 |
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| 269. | „ „ A, dorsal area of abdominal terga VII and VIII. B, sternum VII. | | p. 319 |
| 270. | <i>Leptopsylla hamifer longiloba</i> , sternum VII | | p. 320 |
| 271. | <i>Leptopsylla hamifer hamifer</i> , the same | | p. 320 |